AMENDMENTS TO THE DRAWINGS

The attached replacement sheet of drawings includes changes to Fig. 5 to correct misspellings.

Attachment: Replacement Sheet

REMARKS

Reconsideration and allowance are respectfully requested.

Consideration of the IDS filed on July 10, 2008 is requested.

A new more descriptive title is provided as requested.

The specification has been amended to improve grammar, idiom, and formatting. No new matter is believed to be added. A substitute specification and a marked up copy of the substitute specification are included for the Examiner's convenience. Approval and entry are requested.

Misspellings in Figure 5 are corrected in the replacement drawing sheet. Approval and entry are requested.

Claims 1 and 3-8 stand rejected under 35 U.S.C. §102 as being anticipated by Oglesbee. Claim 2 stands rejected under 35 U.S.C. §103 as allegedly being unpatentable based on Oglesbee. These rejections are respectfully traversed.

Oglesbee describes a system for charging lithium-based rechargeable batteries. As persons skilled know very well, lithium-based batteries behave very differently compared to lead acid batteries. The claims are amended to be directed to lead acid batteries and solve the difficulties with charging sulphated lead acid batteries. Although the sulphating of lead acid batteries is a well known problem in the lead acid battery art, it has not been satisfactorily solved in a way that restores the sulphated lead acid batteries battery to almost its original state or condition.

The claimed technology solves this problem. A voltage is applied over the terminals of a lead acid battery. The voltage over the connected lead acid battery is then detected to sense an increase of voltage over the battery in order to identify whether the internal resistance of the lead

acid battery has increased compared to a normal state. If so, a burst cycle is initiated that includes applying a plurality of consecutive voltage bursts to the lead acid battery, each burst having a length of at least an order of milliseconds. As a result, the sulphate layers of the lead plates of the battery are reduced and improved charging is achieved. See for example the improvement shown by comparing Figures 2b and 2c in the instant application.

The sulphating problem, which is closely linked to lead-acid batteries, is not a concern in lithium-based rechargeable batteries. Therefore, it is not surprising that Oglesbee fails to disclose applying a voltage to the terminals and detecting the voltage to sense an increase of voltage over the battery in order to identify whether the internal resistance of the battery has increased compared to a normal state. Although the voltage over the terminals is measured in Oglesbee to control the charging state of the battery, no voltage is applied before the measurement. The voltage measured is compared to a lower and an upper threshold. When the measured voltage is below the lower threshold, charging commences. When the voltage then reaches the upper threshold, charging is stopped, thus providing a sort of pulsed charging. But the charging is stopped to allow for ionic relaxation. This ionic relaxation phenomena, which is connected to ionic agitation during charging, is very specific for lithium-based batteries and is not found in lead-acid batteries. In addition to the fact that the pulsing in Oglesbee is performed for very different reasons, there is no teaching in Oglesbee that the pulsed charging that allows ionic relaxation could be applied in lead-acid batteries in order to reduce the internal resistance of sulphated batteries.

In summary, Oglesbee fails to disclose the charging of a sulphated lead-acid battery in accordance with the steps of claim 1. Nor is there reason why the skilled person would contemplate the teachings of Oglesbee regarding this problem because of the very different

natures of the battery types. If the Examiner elects to maintain this rejection, Applicant requests that the Examiner specifically identify where each of the claimed steps in claim 1 is found in the reference:

- detecting the voltage over the connected lead acid battery to sense an increase of voltage over said lead acid battery in order to identify whether the internal resistance of the lead acid battery has increased compared to a normal state;
- initiating a burst cycle if said internal resistance is identified as increased, wherein a plurality of consecutive voltage bursts are applied to a connected lead acid battery to be charged, each burst having a length of at least an order of millisecond (mS) and each burst delivering an amount of charge to the lead acid battery and thereby successively lowering the internal resistance of the lead acid battery; and
- initiating a charging cycle to charge the connected lead acid battery when said burst cycle has been terminated.

Applicant cannot discern from the Examiner's general reference to two columns 3 and 4 of text in Oglesbee what specifically the Examiner contends corresponds to each bulleted claim feature.

The application is in condition for allowance. An early notice to that effect is requested.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____
John R. Lastova
Reg. No. 33,149

JRL:maa
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100